

CLAIMS

1. A filter for a printhead assembly, the filter comprising:
a frame having an opening formed therein;
filter material enclosing the opening of the frame; and
a fluid fitting associated with the frame, the fluid fitting including a fluid port offset from the frame and a fluid passage communicated with the opening of the frame and the fluid port.
2. The filter of claim 1, wherein the filter material is secured to the frame around a perimeter of the opening.
3. The filter of claim 1, wherein the filter material has a mesh size in a range of approximately 2 microns to approximately 20 microns.
4. The filter of claim 1, wherein the filter material is adapted to allow liquid ink to pass therethrough, and wherein the filter material is adapted to prevent air from passing therethrough when the filter material is wetted by the liquid ink.
5. The filter of claim 1, wherein the fluid passage of the fluid fitting is adapted to direct air from the fluid port of the fluid fitting to the opening of the frame.
6. The filter of claim 5, wherein the filter material is adapted to trap air within the opening of the frame.
7. The filter of claim 1, wherein the fluid port of the fluid fitting has a longitudinal axis, and wherein the frame is oriented substantially parallel with the longitudinal axis of the fluid port.

8. The filter of claim 7, wherein the fluid passage of the fluid fitting has a surface oriented at an angle to the longitudinal axis of the fluid port.
9. The filter of claim 8, wherein the angle is approximately a right angle.
10. The filter of claim 8, wherein the angle is an acute angle.
11. The filter of claim 1, wherein the frame has a first face and a second face opposite the first face, wherein the opening of the frame communicates with the first face and the second face, and wherein the filter material is provided on the first face and the second face of the frame.
12. The filter of claim 1, wherein the frame has a substantially rectangular shape, and wherein the fluid port of the fluid fitting extends from a side of the substantially rectangular shape.
13. The filter of claim 12, wherein the frame includes at least one separator extending within the opening of the frame between opposite sides of the substantially rectangular shape.
14. A method of forming a filter for a printhead assembly, the method comprising:
 - associating a fluid fitting with a frame having an opening formed therein, including offsetting a fluid port of the fluid fitting from the frame and communicating a fluid passage of the fluid fitting with the opening of the frame and the fluid port; and
 - enclosing the opening of the frame with filter material.
15. The method of claim 14, wherein enclosing the opening of the frame includes securing the filter material to the frame around a perimeter of the opening.

16. The method of claim 14, wherein the filter material has a mesh size in a range of approximately 2 microns to approximately 20 microns.
17. The method of claim 14, wherein the filter material is adapted to allow liquid ink to pass therethrough, and wherein the filter material is adapted to prevent air from passing therethrough when the filter material is wetted by the liquid ink.
18. The method of claim 14, wherein the fluid passage of the fluid fitting is adapted to direct air from the fluid port of the fluid fitting to the opening of the frame.
19. The method of claim 18, wherein the filter material is adapted to trap air within the opening of the frame.
20. The method of claim 14, wherein associating the fluid fitting with the frame includes orienting a longitudinal axis of the fluid port of the fluid fitting substantially parallel with the frame.
21. The method of claim 20, wherein communicating the fluid passage of the fluid fitting with the opening of the frame and the fluid port includes orienting a surface of the fluid passage at an angle to the longitudinal axis of the fluid port.
22. The method of claim 21, wherein the angle is approximately a right angle.
23. The method of claim 21, wherein the angle is an acute angle.
24. The method of claim 14, wherein the frame has a first face and a second face opposite the first face, wherein the opening of the frame communicates with the first face and the second face, and wherein enclosing the opening of the frame with the filter material includes providing the filter material on the first face and the second face of the frame.

25. The method of claim 14, wherein the frame has a substantially rectangular shape, and wherein associating the fluid fitting with the frame includes extending the fluid port of the fluid fitting from a side of the substantially rectangular shape.
26. The method of claim 25, wherein the frame includes at least one separator extending within the opening of the frame between opposite sides of the substantially rectangular shape.
27. A printhead assembly, comprising:
 - a carrier having a fluid manifold defined therein;
 - a printhead die mounted on the carrier and communicated with the fluid manifold; and
 - a fluid delivery assembly coupled with the carrier and including a filter including a frame having an opening from therein, filter material enclosing the opening of the frame, a fluid port offset from the frame, and a fluid passage communicating with the opening of the frame and the fluid port,
 - wherein the fluid port of the filter communicates with the fluid manifold of the carrier.
28. The printhead assembly of claim 27, wherein the filter material of the filter is adapted to allow liquid ink to pass therethrough, and wherein the filter material of the filter is adapted to prevent air from passing therethrough when the filter material is wetted by the liquid ink.
29. The printhead assembly of claim 27, wherein the fluid passage and the fluid port of the filter are adapted to route liquid ink to the fluid manifold of the carrier.

30. The printhead assembly of claim 27, wherein the fluid passage of the filter is adapted to direct air from the fluid port to the opening of the frame, and wherein the filter material of the filter is adapted to trap air within the opening.
31. The printhead assembly of claim 30, wherein the fluid passage of the filter is adapted to direct air from the fluid port to the opening of the frame when the printhead assembly is oriented at an angle.
32. The printhead assembly of claim 27, wherein the fluid port of the filter has a longitudinal axis, and wherein the frame of the filter is oriented substantially parallel with the longitudinal axis of the fluid port.
33. The printhead assembly of claim 32, wherein the fluid passage of the filter has a surface oriented at an angle to the longitudinal axis of the fluid port.
34. The printhead assembly of claim 33, wherein the angle is approximately a right angle.
35. The printhead assembly of claim 33, wherein the angle is an acute angle.
36. A method of supplying fluid to a printhead die of a printhead assembly, the method comprising:
 - mounting the printhead die on a carrier, including communicating a fluid manifold of the carrier with the printhead die;
 - communicating a fluid delivery assembly containing a supply of the fluid therein with the fluid manifold of the carrier; and
 - distributing the fluid to the printhead die through the fluid delivery assembly and the fluid manifold, including routing the fluid through a filter of the fluid delivery assembly,

wherein the filter includes a frame having an opening formed therein, filter material enclosing the opening of the frame, a fluid port offset from the

frame, and a fluid passage communicating with the opening of the frame and the fluid port.

37. The method of claim 36, wherein routing the fluid through the filter includes passing liquid ink through the filter material and includes preventing air from passing through the filter material when the filter material is wetted by the liquid ink.

38. The method of claim 36, wherein routing the fluid through the filter includes passing liquid ink through the filter material into the opening of the frame through the fluid passage and through the fluid port to the fluid manifold of the carrier.

39. The method of claim 36, further comprising:

collecting air from the fluid manifold of the carrier in the filter, including directing the air from the fluid port through the fluid passage to the opening of the frame and trapping the air within the opening with the filter material.

40. The method of claim 39, wherein directing the air includes directing the air from the fluid port through the fluid passage to the opening of the frame when the printhead assembly is oriented at an angle.

41. The method of claim 36, wherein the fluid port of the filter has a longitudinal axis, and wherein the frame of the filter is oriented substantially parallel with the longitudinal axis of the fluid port.

42. The method of claim 41, wherein the fluid passage of the filter has a surface oriented at an angle to the longitudinal axis of the fluid port.

43. The method of claim 42, wherein the angle is approximately a right angle.

44. The method of claim 42, wherein the angle is an acute angle.